

Final Progress Report

Community Participation for Conservation Success

**Promoting Effective Conservation of Vietnam's Natural Heritage through
Community-Based Environmental Education**

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Project Summary

This project was designed to increase the effectiveness of conservation programs in Vietnam by promoting community participation through Community-Based Environmental Education (CBEE). The project worked to achieve the following objectives:

- increase the immediate and long-term capacity of government to incorporate CBEE training into mainstream training institutions, and
- contribute directly to successful conservation action in two priority sites in the Central Annamites by integrating CBEE activities into the implementation of protected area conservation projects.

World Wildlife Fund, Xuan Mai Forestry University and selected provincial Forest Protection Departments worked in collaboration to accomplish these objectives by: 1) developing curricula for pre-service and in-service training in CBEE at Xuan Mai, 2) training a team of University trainers and piloting the CBEE training courses, and 3) developing and implementing innovative CBEE projects in cooperation with two Protected Areas (PAs) in the Central Annamites as part of the wider conservation strategy for the Central Annamites.

Activities Description

Result I: Collaboratively designed and tested CBEE curricula established within pre-service and in-service training programs for Protected Area managers at Xuan Mai Forest University.

A 2-day curriculum development workshop was held in March 2003 by Xuan Mai Forestry University and WWF with participants from ministries, nongovernmental organizations and other forestry universities. The purpose of the workshop was a stakeholder analysis and planning for a training needs assessment. The main activities of the workshop were: 1) a Strengths, Weaknesses, Opportunities, and Threats analysis of Xuan Mai University from the point of view of university staff members and outsiders; 2) the identification of the key stakeholders in CBEE to be consulted for the training needs analysis (TNA), and; 3) general planning of the TNA as a tool to broaden the project's understanding of the CBEE knowledge, skills, and attitudes—both existing and needed—as perceived by stakeholders.

A TNA was conducted with both WWF and Xuan Mai representatives conducting interviews, surveys and field visits to collect information from the broad range of identified stakeholders including universities, NGOs, government organizations, Forest Protection Departments, and communities. Over 100 people were surveyed. WWF led the analysis of the resulting information and production of a report on the main themes and results.

A second workshop was held at the end of April 2003 in order to present and discuss the results of the TNA with the survey participants. The most important activities of this workshop were: 1) the presentation and group analysis of the results of the TNA in the context of developing the curriculum, and; 2) the use of the TNA information to develop a curriculum framework. A Xuan Mai Working Group consequently wrote a draft curriculum based on the curriculum framework. This draft was submitted to the University Board in June 2003 for approval as a taught course.

Upon approval by the University Board, the draft curriculum was written up into a course workbook and teacher's notes by one WWF staff and three international experts. The curriculum was first tested in a training of trainers course with Xuan Mai Lecturers in July 2003 (see Result II). The Working Group revised the curriculum based on the Lecturer's recommendations and the workbook and teachers notes were translated into Vietnamese. In November 2003, the newly trained Lecturers taught the curriculum to thirty-four students and three professional Protected Area staff. The Lecturers taught a second group of thirty-eight in-service students in March 2004 (see Result III). Recommendations from these test groups were used by the Xuan Mai Working Group to revise the curriculum. The curriculum was tested and revised yet again after field activities in Song Thanh and Phong Dien Nature Reserves (see Result IV). The final version was sent to a designer and printer in June 2004. The published curriculum, in addition to being used by Xuan Mai University, was distributed in July 2004 to other major Universities and colleges on forestry and agriculture, to more than 60 National Parks and protected areas, and also to organizations who work on conservation education throughout the country.



The final curriculum: Conservation Education with the Participation of Local People

Result II: A core group of University staff trained as trainers in CBEE and providing on-going training to PA staff.

In July 2003, a total of 17 lecturers from Xuan Mai University's Faculty of Silviculture, the Faculty of Forest Resource Management and Environment, and the University's Social Forestry Training Center participated in the training of trainers, organized by WWF. The training of trainers was given by ten experts, four of whom were Vietnamese and six of whom were foreigners. The experts addressed topics including: introduction to environmental education, modern education theory, communication, presentation, interpretation, material design and development, community organization and dynamics, behavior change and how to develop a CBEE project and research methods to do so.



A view of the community based environmental education course for lecturers of Xuan Mai University

The training of trainers was designed to increase the capacity of the lecturers in community-based environmental education and to provide them with knowledge, understanding and hands-on experience about community-based environmental education. The course also prepared Xuan Mai lecturers to teach the newly developed CBEE curriculum through participatory, learner-centered education methods.

As part of their training, the lecturers visited Cuc Phuong National Park where they learned about the Cuc Phuong Conservation Project, and in particular

the village program for local communities. The lecturers also practiced using community facilitation skills and participatory rapid appraisal tools to design a CBEE project by working with the Yen Tri community. Finally, the lecturers visited the Cuc Phuong Visitor Center and learned more about nature interpretation and material design.

Result III: All new protected area managers graduating from Xuan Mai receive CBEE as part of their regular training.

The ultimate aim of the curriculum developed for Xuan Mai Forestry University was to enhance the skills of the students so that they can work with a community on CBEE. The course's objectives are to enable the students to be aware of and understand important environmental issues facing Vietnam and the world; explain the concept of CBEE and why CBEE is important in conservation; identify root causes of and solutions for activities and behavior that impact negatively on the environment—while encouraging positive actions and attitudes—and finally; to enable students to design and implement a CBEE project.

The course was delivered to students for the first time in November 2003 and included 34 students from the of Forest Resource Management and Environment department of Xuan Mai University and 3 conservation education professionals from Song Thanh Nature Reserve, Phong Dien Nature Reserve, and the Quang Nam Forest Protection Department. In March 2004, the course was given a second time to 38 in-service students who work part-time for different Forest Protection Departments (FPD) throughout the country and study part time in the University. The 13-day intensive course counted as one subject in their specialized fields (for which they received 3 credits upon completion). When the three staff of the nature reserves returned to work, they were accompanied by two students in each area who helped to design and implement the CBEE projects with actual local communities. (See Result IV for details.)

The course, given by Lecturers who participated in the training of trainers course held in July 2003, covered topics including: an introduction to environmental education and CBEE, behavior and the environment, community facilitation, and CBEE project design targeted at behavioral change. The course also discussed how to use education, communication and advocacy as tools in CBEE. In addition to class work on these subjects, the course included three days of field work. The students in the first course spent their three days in Xuan Son National Park and those in the second course visited Cat Ba National Park. In each Park, the students practiced community facilitation skills and seven participatory rapid appraisal (PRA) tools in CBEE by working with the local community. After completing the field trips, the students worked in groups to develop a practice CBEE project based on the results of the field trip.

Result IV: CBEE activities developed and implemented at two key sites, and demonstrated to have increased the effectiveness of conservation initiatives at those sites.

Quang Nam

Following the training of trainers in July 2003, WWF's environmental education staff and a lecturer from Xuan Mai Forestry University (who participated in the training of trainers course) worked in collaboration with the Ka Tu people from Vinh and Pa Toi villages of Tabhing commune in October 2003 to design a CBEE field project in the buffer zone of Song Thanh Nature Reserve. The participatory process used to design the field project serves as the

core of the curriculum developed for Xuan Mai University. The results of this field work were incorporated into the curriculum development prior to its first test-run for students in November 2003.

Design Phase

The joint WWF and Xuan Mai team worked with a group of 20 Ka Tu people selected by the village to represent them. According to the results of the design phase, the biggest conservation problem in this area is the loss of biodiversity and forest. The two main causes of these losses are hunting and timber exploitation carried out by both outsiders and local communities.



Facilitate Ka Tu people in designing a conservation education programme

Based on the results of a survey of existing knowledge, attitudes, skills, options and barriers in the community and by using other participatory rapid appraisal tools, a community-based environmental education (CBEE) project that could offer solutions was designed in collaboration with the local community. In order to deal with local threats, the Ka Tu people identified a number of solutions, including a short training course for their community on basic ecology and the functions of ecosystems.¹ The Ka Tu people also wanted to learn about tree nurseries and agroforestry techniques, in order to improve

fallow, establish woodlots and create boundaries with live trees—all of which help to stop local people from cutting down the forest. Finally, the Ka Tu people determined a need for veterinarian skills and help in obtaining loans so that they can raise animals for food and to sell instead of hunting. In order to address biodiversity and forest loss caused by outsiders, the Ka Tu people identified the need for training to form community conservation and enforcement teams, so that they can patrol the forests against outsiders engaged in illegal hunting and logging.

Implementation Phase

While the participatory design was conducted by WWF staff and Xuan Mai Lecturers, the project implementation was conducted primarily by students participating in the new CBEE course, under Xuan Mai supervision. Students from the course delivered the training on environmental principles and the training on nursery development and agro forestry. Held in March 2004, both courses were considered successes by the trainers and the communities. Results of the trainings included the establishment of a communal nursery and community planting of five different species including rattan. The community also planted sample woodlots, live fences and improved fallow.

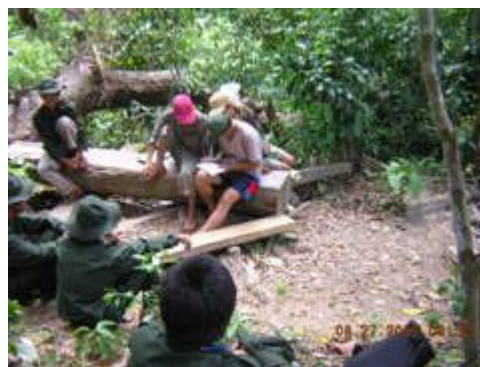


Learning about biodiversity in the training on environment principles given by the two students selected to work with local people in Song Thanh Nature Reserve

¹ It was felt that only a short course is needed because people's knowledge of these topics is fairly good already, and they only need to learn a few environmental principles and how all natural things were related in the web of life.

The training on livestock and veterinarian skills was delivered in June 2004. During the first four days, 30 participants from Vinh and PaToi village, Tabhing commune, and Song Thanh Nature Reserve learned how to raise pigs and cows. They practiced preparing food and caring for the animals. They also learned how to construct a pig sty and a cow stable in an appropriate way. During the last four days, all participants were instructed in how to treat their animals for disease including how to diagnose and prevent diseases. In every section of the training course, the participants immediately practiced the skills they had learned. This ensured the transfer and sustainability of the new skills and knowledge so that they can raise animals and treat diseases on their own.

In order to mitigate the threats from illegal hunting and logging, “Village Protection Teams” were set up in cooperation with WWF’s MOSAIC² project in August 2004. The teams, known as *ToQuan Ly Bao Ve Rung Thon* in Vietnamese, are operating in nine Ka Tu villages within Tabhing commune in the buffer zone of Song Thanh Nature Reserve in Quang Nam province. Each team has 4-5 members, all with a deep and seasoned knowledge of the local forests. A total of 50 local rangers are now actively patrolling Tabhing’s forests, with detailed routes and strategies for monitoring and enforcing local forest law.



Village Protection Teams are dealing with forest violations

Thua Thien Hue

On February 28 through March 2, 2004 two students went to Thua Thien Hue with the conservation education team from WWF, and the Hue Province Forest Protection Department to work with representatives from 288 households in Khe Tran, Tan My and Ha Long communes adjacent to Phong Dien Nature Reserve. Over a four day period of intensive discussion, group interviews and data analysis, a tailor-made CBEE program was developed.

Design Phase

The group used the participatory methodology taught in the course at Xuan Mai, to identify the environmental problems in the area, the behaviors that cause these problems, and the reasons for these negative behaviors which might include a lack of knowledge and understanding, poor attitudes, lack of alternative options and skills, or external barriers such as poor infrastructure, and lack of policy.

The community unanimously agreed that the biodiversity, forest cover, soil and water quality have been degrading rapidly since 1964. They attributed this degradation to war, hunting, timber extraction, excessive rattan harvest, gold mining and most shocking of all, burning of forest to recover unexploded bombs to sell for scrap metal.

According to the community, the first instance of forest decline was attributed to the intense bombing campaign undertaken by American forces in 1964-67. They attributed an estimated 30% decrease in forest cover and 50% decrease in water quality to this needless destruction. They cited an influx of migrants in 1975 and ebony harvesting in 1978 to be the second largest impact on forest quality and wildlife populations in the history of the area. The next big hit came in 1986-89 when timber was heavily extracted by Government enterprises and gold mining activities took place by local inhabitants and external interest groups. Today the largest threats are considered to be from hunting, and timber extraction from external traders and from

² MOSAIC stands for Management of Strategic Areas for Integrated Conservation.

the local population. Gold mining undertaken by highly organized mafia type groups from Thai Nguyen is also a big problem according to the Forest Protection Department and local communities.

The students, WWF team and the community discussed the different problems and through a facilitated process were able to identify potential solutions that the community felt could lead to a change in behaviors and essentially contribute to conservation. The community then decided on the type of conservation education, communications and advocacy activities that could make these solutions a reality.



Participants are arranging their pictures to create community photo exhibits

Implementation Phase

Four students and the three nature reserve staff who graduated from the first CBEE course at Xuan Mai assisted the communities in implementing the solutions they had designed.

These activities agreed upon by the community included a 3-day intensive field trip into the forest and a 4-day classroom session to learn about different ecological functions and values of natural ecosystems. A second objective of the field study was to instill a sense of wonder and care for the forest by the community. While in the forest, the

community members, armed with a disposable camera, documented the forest and other creatures to demonstrate their assigned topic. Each participant then selected their best pictures to present their topic, wrote a short essay about what the picture meant, why they took it and how it contributed to the topic. The whole group displayed their photo exhibit in the local collective farm meeting house for visitors and others who had not participated in the course to see, and as a reminder to the participants themselves about what they learned in the course. WWF selected the best pictures and created a community poster with the message of conserving the nature and biodiversity.

A puppet show called the *The Treasure of the Forest* performed by the Vietnam National Puppet Theater and a short film festival showing five environmental films were performed for these communities in April 2004. Community members reflected that the field training and the other awareness activities exposed them to new information and gave them an understanding and appreciation for nature that encourages a desire and motivation to participate in conserving it.



The puppet show, The Treasure of the Forest, was performed for local people at Phong Dien Nature Reserve

Also in April, Xuan Mai students worked with WWF to deliver a hands-on training workshop on tree nurseries and woodlot establishment and management using slow growing indigenous trees. Inputs such as seeds and polyurethane pots were supplied to participants. Community members expect that if they are able to produce their own valuable wood, they will no longer need to enter the forest to harvest timber. They realized that this endeavor takes a long time before they reap benefits but they decided it was worth it and were committed to invest time and energy into it. In September

2004, seeds of three indigenous timber species were delivered to local people, based on their needs. The local people then made their own nursery gardens. The same process was also implemented in Song Thanh Nature Reserves. In both instances, the number of people wanting to receive seeds was more than the number of people who were trained. The people who did not participate in the training were so interested in planting trees that they came to help their neighbors in taking care of the nursery gardens and learned from them how to do it.



Five months after the training, participants taking care of their own seedlings

A training workshop on animal husbandry and on basic veterinarian skills to prevent and treat basic livestock diseases was also organized and conducted in this community in July 2004. Thirty participants from three communes around Phong Dien Nature Reserve were trained. The training offered them the chance to practice on real animal and materials. A set of 60 pictures of sick animals were delivered and displayed in the collective farm meeting house so that local people could see and diagnose their animal's disease. The community greatly appreciated this training course. Communities have argued that if they had the skills to raise healthy livestock, which provide

animal protein for consumption and extra income, they will no longer need to hunt.

In addition to these capacity-building activities, community members emphasized the importance of good forest patrolling and enforcement of violations. The community suggested that if external traders are to be thwarted from continued exploitation, the community must be better equipped to organize and implement a community patrol and enforcement team and that the Forest Protection Department and Nature Reserve staff need to greatly improve their patrolling and enforcement efforts. These recommendations have been shared with Hue Forest Protection Department and WWF hopes they will be addressed in the near future with new projects in the pipeline for support by the MacArthur Foundation and the World Bank/Global Environment Facility.

Result V: EE demonstrated as a critical component of Protected Area management to influence government budgetary priorities.

It recently became a National directive that environmental education be part of the curriculum in universities in Vietnam. The CBEE course came at an opportune moment, and is now the first environmental education course that has been established under this directive. Xuan Mai Forestry University is under the Ministry of Agriculture and Rural Development (MARD) which is also responsible for many protected areas. This linkage to both the university and field conservation ensures a crossover and synergy of ideas. The rector of Xuan Mai and the professors in the Working Group have also been promoting the importance of this course to MARD and protected areas directly. Furthermore, other forest universities are already interested in potentially adopting this curriculum in their faculties and already have budget allocated for this because of its priority nationally. There are strong relationships with faculty in these universities and the working group at Xuan Mai. The project activities with communities are also being carried out with the most developed and active Forest Protection Department's and will act as a stepping stone for the results and lessons learned to be spread to other areas.

The final workshop held in October 2004 served to promote and extend the results of the CBEE project to a wide array of audiences. Fifty-five people participated in the workshop including faculty deans and professors from different Forestry Universities throughout Vietnam, Conservation staff from Government organizations, Non governmental organizations, and related projects, leader and awareness officer from key Protected Areas in the Central Annamites and leaders from the Forest Protection Departments. Participants were inspired by the new approach to conservation education emphasizing participation of local people. They contributed useful comments for the curriculum. Professors participating in the workshop expressed interest in setting up a similar curriculum in their own Universities. This proposal was strongly supported by other conservation staff and leaders at the workshop. Participants also discussed how to set up a network of conservation education throughout Vietnam and a sustainable fund for the network. The curriculum will be revised by the project staff based on feedback from the workshop. It was also agreed that a proposal for phase II of the project, to replicate the curriculum across Vietnam, will also be completed.



Participants of the final workshop at Xuan Mai University

Result VI: Demonstration activities and materials that can be used to magnify the results from the project to other priority conservation areas in the region undertaken

Articles have been written continuously about the results and successes in the WWF newsletter and posted on the web. The course workbook and teacher's notes have been developed, published and distributed, and activities in project sites with demonstration activities were promoted in the final workshop and informally through networking of project participants at all levels including the university, WWF, MARD, Thua Thien Hue and Quang Nam Forest Protection Department's and the communities.

Monitoring and Evaluation

The project attempted to measure changes in knowledge, skill, attitude and behavior of local people. However, changes in behavior require a long time to observe whereas the project time was short. Thus, changes in knowledge and attitude were recorded as follows:

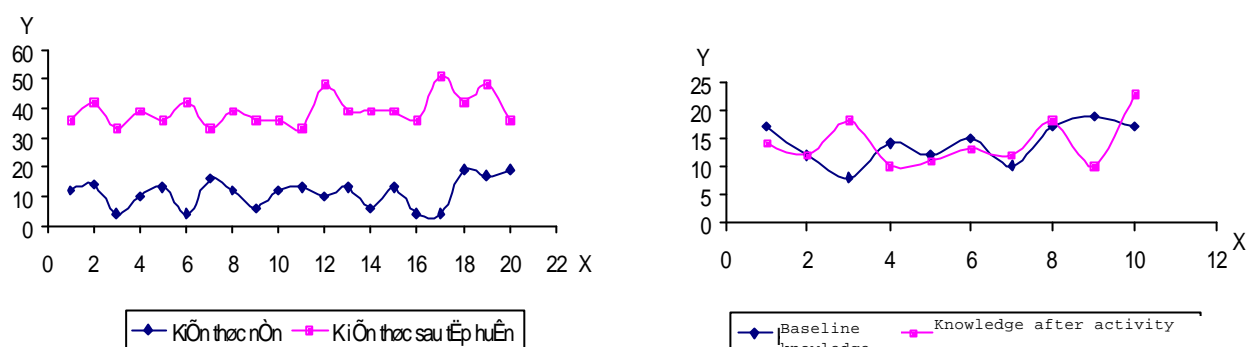


Figure. Changes in knowledge of local people in the project site (left) and control site (right) in Song Thanh Nature Reserve.

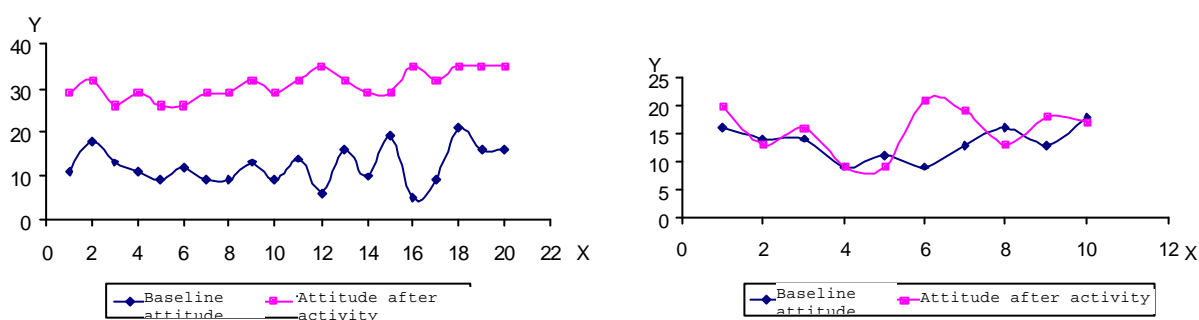


Figure. Changes in attitude of local people in the project site (left) and control site (right) in Song Thanh Nature Reserve. The horizontal axis is the order of interviews that was arranged randomly. The vertical is the mark of the respective interview.

The data for the graph showing changes in knowledge was gathered via an Environment Information Assessment questionnaire (see attachment) developed by the WWF. WWF staff and Xuan Mai students used the questionnaire to conduct interviews with local people before and after project activities. Data on changes in attitudes was gathered using the Environmental View Point Survey (see attachment), developed by WWF.

Challenges

1. The project was delayed for three months due to weather conditions that prevented local people from setting up their tree nurseries.
2. The project was unable to measure changes in behaviors in local hunting and logging due to the short timeframe of the project.

Successes

1. The innovative subject, Community-Based Environmental Education, was developed and integrated in the official curriculum of Xuan Mai Forestry University.
2. A total of 17 lecturers at Xuan Mai Forestry University were trained to deliver the new CBEE course, called Conservation Education with the Participation of Local People.

3. A total of 75 students and Protected Area staff increased their capacity to improve local people's conservation knowledge at the same time as they helped improve local people's lives.
4. The curriculum was sent to more than 60 Universities, protected areas and other conservation organizations in an effort to multiply the innovative CBEE approach.
5. More than 800 local people in Song Thanh and more than 1000 local people in Phong Dien Nature Reserves participated in the conservation project.
6. The project was strongly supported by local authorities including Xuan Mai University Management Board, Ministry of Agriculture and Rural Development, Thua Thien Hue and Quang Nam Forest Protection Departments, and Song Thanh and Phong Dien Nature Reserves. This institutional support provides a strong foundation for long-term sustainability.

This project proved to be highly successful in achieving its stated objectives. The CBEE curriculum is established at Xuan Mai Forestry University and government capacity—and interest—has been built to mainstream CBEE into training institutions across Vietnam. Further, the project contributed directly to successful conservation in Quang Nam and Thua Thien Hue provinces by building community knowledge and capacity to sustainably manage their natural resources and to protect those resources from outside exploitation and threats. This project not only achieved its stated aims but has laid a strong groundwork for the continuation and long-term sustainability of the knowledge, skills and approaches transferred to the Vietnamese people through the generous and strategic support of EAPF.